HORNER STREET BRIDGE
Horner Street over Stony Creek River
Johnstown
Cambria County
Pennsylvania

HAER No. PA-406

HAER
PA
11-JOTO,
138-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Northeast Region
Philadelphia Support Office
U.S. Custom House
200 Chestnut Street
Philadelphia, P.A. 19016

HAER
PA
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HISTORIC AMERICAN ENGINEERING RECORD

HORNER STREET BRIDGE HAER NO. PA-406

Location: Horner Street, Over Stony Creek River, Johnstown, Cambria County, Pennsylvania

UTM: 17.677460.4463540
Quad: Johnstown, Pennsylvania

Date of Construction: Constructed 1916-1917

Engineer: Gustav A. Flink

Builder: John L. Elder

Present Owner: City of Johnstown
Department of Engineering
Johnstown, Pennsylvania

Present Use: Vehicular and pedestrian bridge

Significance: The Horner Street Bridge is a double span, reinforced concrete, through arch bridge. Designed by Consulting Engineer Gustav A. Flink and built in 1916-1917 by John L. Elder under contract to the City of Johnstown, the bridge carries Horner Street over Stony Creek River in Johnstown. An early, well-preserved example of a reinforced concrete "Rainbow" or through arch bridge, the Horner Street Bridge has been determined eligible for listing in the National Register of Historic Places by the Pennsylvania Historical and Museum Commission Bureau for Historic Preservation.

Project Information: This documentation was undertaken from January 1989 through May 1992 by the City of Johnstown and the Pennsylvania Department of Transportation (PennDOT) as a mitigation measure prior to replacement of the bridge.

P.A.C. Spero & Company
Historic Structures Consultants
Baltimore, Maryland
for the City of Johnstown and PennDOT

Located in the City of Johnstown, Pennsylvania, the Horner Street Bridge carries Horner Street over Stony Creek River between the Seventh Ward (Hornerstown) and the Eighth Ward (Grubbtown). Designed by Consulting Engineer Gustav Flink in 1915-1916 and built by Contractor John L. Elder in 1916-1917, the bridge has carried trolley, vehicular, and pedestrian traffic during more than three-quarters-of-a-century of service. The Horner Street Bridge has been determined eligible for listing on the National Register of Historic Places by the Pennsylvania Historical and Museum Commission.

The Horner Street Bridge is a two-span concrete arch bridge built in 1916-1917. This through arch represents an unusual use of concrete in a form typically associated with steel arches. It is the earliest known example of this type in Pennsylvania. Sometimes known as "Rainbow" or "Marsh" arches, concrete bowstring arches were built both as proprietary types and as independently designed bridges. Though not a commonly built concrete bridge type, they were popular in the early decades of the twentieth century. A known patented bowstring was the "Marsh" arch, patented by James B. Marsh and built by his Marsh Engineering Company of Des Moines, Iowa, between 1912 and 1930.

The concrete through arch, with its two ribs extending above the roadway, can take two forms. The arched ribs may be rigidly fixed at the piers or abutments, or each arch rib may be constructed with a tie and rest on the supports. Consulting Engineer G.A. Flink of Harrisburg designed the Horner Street Bridge in 1915-1916, in the form of a rigidly fixed "Rainbow" arch. The bridge was constructed in 1916-1917 and originally carried trolley traffic. The trolley rails were supported on two fourteen-inch deep stringers on five-foot centers that span between the floorbeams. The trolley tracks have been removed and a four-inch thick bituminous overlay was placed on the structure.

A limited number of original design drawings are available in blueprint form and include Drawing No. R63, Sheets A, 1-7, 10-12, and one drawing on which the sheet number is missing. These drawings are dated September 1915 through May 1916. The bridge configuration and reinforcement schemes are clearly illustrated. Two arch ribs rise from each abutment and meet at the center pier, forming two through arch spans. The drawings illustrate that the arch ribs and portal are reinforced with truss-type laced steel reinforcement. The deck is carried by floor beams which are connected to the arches by hangers. Encased in the concrete hangers, hooked steel reinforcement bars make direct contact at the top and bottom with the arch extrados bars and with the bottom floor beam bars. Decorative railings were made of reinforced concrete in a star pattern, similar in style to the railing of a single-span concrete through arch in Delaware County, Pennsylvania, the Second Street Bridge in Chester.

The entire bridge is of reinforced concrete construction, with a total span length of 225 feet from face-of-abutment to face-of-abutment. The superstructure consists of two through concrete arches with a clear span of 109 feet each.

The deck consists of an eight-inch thick reinforced concrete slab supported on concrete floor beams spaced at nine-foot, three-inch centers. The floorbeams are supported by concrete hangers to the arch. A three-inch thick brick wearing course with an approximate one-inch sand leveling course was originally placed on top of the eight-inch thick concrete deck and has since been overlaid by a four-inch thick bituminous wearing surface.

The roadway width is approximately twenty-four feet, which is also the clear distance between the faces of the arches. There are no barriers along the face of the arch and hangers to prevent vehicular collisions with these members.

There are two concrete portal frames in each span, which serve to brace the arches. The clearance under these portals is approximately fifteen feet, eight inches at the roadway centerline and lessens to approximately twelve feet, four inches at the face of the arches.

There are two sidewalks on the structure, consisting of a six-inch thick reinforced concrete slab supported by cantilever extensions of the floor beams beyond the outside face of the arches. The clear width of the sidewalks is approximately seven feet, four inches. A pipe parapet is present along the outside face of the arch at the east sidewalk to prevent pedestrians from walking out from behind the hangers onto the roadway. The west sidewalk does not have such a railing.

The substructure consists of two reinforced concrete abutments and one reinforced concrete pier, all on spread footings. Concrete-paved slope protection exists in front of both abutments, and a tapered apron surrounds the base of the pier.

Historical evidence indicates that the Horner Street Bridge in Johnstown was constructed primarily to improve trolley and vehicular service linking key residential and commercial neighborhoods that were rapidly growing during the early twentieth century.

Founded in the 1790s along the Conemaugh River and economically boosted by the advent of the Pennsylvania Canal during the 1830s, Johnstown grew throughout the nineteenth century as an important industrial center of western Pennsylvania. When canal traffic declined in the 1850s, the community fortunately became a major stop on the Pennsylvania Railroad between Pittsburgh and Philadelphia. Good local transportation facilities and the continual demand for train rails prompted iron furnace operator George King and his associates to establish the Cambria Iron Company at Johnstown in 1854. A long-term contract with the Pennsylvania Railroad and the boom market of the Civil War era made the company the largest, most prosperous employer in the city. By 1865, Cambria boasted two new mills and a work force of some 2700 laborers. On the eve of the great 1889 Johnstown Flood, the company had about 7000 employees and had diversified production to include barbed wire and other iron and steel items marketed to farmers and ranchers.

Until the 1890s, Johnstown consisted of a loosely-linked set of adjacent communities located along the banks of the Conemaugh, the Little Conemaugh, and the Stony Creek or Stony Creek River. The core of the old city occupied a central position at the confluence of the Little Conemaugh and the Stony Creek River. Immediately to the east of the core was the community of Conemaugh, while Millville on the western side of the city center was located along the northern bank of the Conemaugh River. Millville was host to the Cambria Company's mills; across the Conemaugh lay Cambria City, home to iron workers employed by the company. Above the big mill to the northeast was Prospect borough, also a workers' residential neighborhood. Beyond Cambria City, the worker communities of Coopersdale, Morrellville, and Oakhurst developed.

In the Little Conemaugh Valley northeast of old Johnstown, the boroughs of Franklin and East Conemaugh were centered on the Pennsylvania Railroad shops. The neighborhood of Woodvale linked these outlying boroughs to Conemaugh and Johnstown. To the south of old Johnstown were Kernville (added to the city in 1851 as the Fifth Ward) and Hornerstown on the east bank of Stony Creek River (incorporated into Johnstown in 1881 as the Seventh Ward). Across Stony Creek River from

Hornerstown was Grubbtown, and bordering Hornerstown on the south was Moxham, established as a company neighborhood by the Johnson Street Rail Company in 1888.

The great Johnstown Flood of 1889 devastated neighborhoods and boroughs located along the banks of the Conemaugh River. Communities along the Stony Creek River suffered some damage from a backwash wave that travelled upstream from the fiery logjam of debris at the old stone bridge over the Conemaugh. In the wake of the catastrophe, a campaign of civic renewal and rebuilding officially unified the boroughs of Johnstown (which already included Hornerstown), Millville, Cambria City, Prospect, Woodvale, Grubbtown, and Conemaugh under one municipal government. The movement for centralized administration was led by Arthur Moxham, founder of the Johnson Rail Company mill and the planned neighborhood of Moxham.

City services obliterated or interrupted by the flood were gradually restored by the new municipal government. After building the ambitious company suburb of Westmont high above Johnstown, the Cambria Iron Company constructed the well-known Inclined Plane in 1891 to carry passengers in cable cars directly up the steep hill from Vine and Union Streets in the city to Edgehill Drive in the new community. By April 1892, under the impetus of the Johnson Street Railway Company's Tom Johnson and Arthur Moxham, the main routes of the devastated old horsecar system were reopened for electric trolley traffic. Hornerstown, linked by a horsecar line to central Johnstown as early as 1883, was reached by the electric cars in 1891, via the Horner Street line.

In 1900, the Horner Street line was extended to reach Moxham; two years later, a further extension took trolleys from Johnstown and Hornerstown through Moxham into Windber, the company town established by the Berwind-White Coal Company some miles south of Johnstown. Until the 1916 construction of the Horner Street Bridge, however, Grubbtown (the Eighth Ward) in the oxbow of Stony Creek River was not linked by trolley to Hornerstown. The Horner Street Bridge was the earliest bridge built at its location and the first bridge to carry Horner Street across Stony Creek River into Grubbtown. The bridge allowed trolley, automotive, and pedestrian traffic to reach Moxham without swinging to the east to follow the Stony Creek River valley.

The local and legislative activity leading to construction of the Horner Street Bridge began in 1913. On August 19 of that year, the Common Council of the City of Johnstown passed Special Ordinance No. 1100, which provided for "the erection and construction of a Public Bridge Crossing the Stonycreek River and Connecting the Southerly Terminus of Horner Street in the Seventh Ward with the Valley Pike in the Eighth Ward at a Point near the Old Suppes Homestead..." Fifty thousand dollars was appropriated to pay for the bridge; the City Engineer was directed to prepare plans and specifications for the structure, advertise for proposals and determine what properties would require condemnation for the bridge approaches. The ordinance passed the city's Select Council on September 23, 1913, and was approved and recorded by the Mayor and City Clerk one month later.

Although Johnstown municipal officials set aside $50,000 for construction of the Horner Street Bridge, on December 1, 1913, they petitioned Cambria County for additional funds. The county Court of Quarter Sessions appointed S.E. Dickey, Fred Custer and George K. Shryock to "determine whether there is occasion for such a bridge" and whether the construction expenses would be more than the City of Johnstown alone could bear. After a delay due to Custer's replacement by Russell R. Yost, the viewers inspected the proposed bridge site on February 21, 1914. They reported on March 2, 1914 that the bridge was needed and Johnstown required aid financing it. On August 10, 1914, Cambria County authorized payment of $30,000 toward defrayment of the construction costs of the Horner Street Bridge. A letter of April 29, 1915, from the Cambria County Clerk to Johnstown's City Treasurer noted that "just as soon as the bridge is completed, the County stands ready to make this [i.e., the payment] good."

Johnstown's preference for a reinforced concrete structure reflected a decision in favor of a bridge built in a medium of demonstrated versatility and strength. Although concrete construction has been dated to ancient times, the modern application of concrete in bridge building occurred almost simultaneously with that of steel. Initially, bridge construction in concrete involved adaptation of traditional masonry arch construction techniques to the new material. Early accomplishments in the United States included the 1871 Prospect Park Bridge in Brooklyn, New York (a non-reinforced concrete example) and the 1889 arch built in Golden Gate Park in San Francisco (the first known reinforced concrete arch constructed in the United States).

Basic reinforced concrete construction methods involved erection of a temporary structure and framework to hold and shape the placed concrete prior to its hardening. All metal reinforcing bars or shapes had to be connected and in position before the concrete was placed. Formwork was generally removed after a stipulated hardening period (frequently 28 days). As concrete bridge innovator Edwin Thacher noted in 1889, the durable yet plastic nature of concrete allowed engineers and architects to build structures that were at once highly useful and attractive to the public.

Once the feasibility of iron and steel reinforcing of concrete was demonstrated, technology rapidly advanced between 1890 and 1910. Used in the form of rolled beams or bars, metal reinforcement added tensile strength to the compressive strength of concrete. Variously deformed or twisted to achieve greater adhesion with the surrounding concrete, reinforcing bars in a wide range of patented schemes were an important component of most reinforced concrete highway bridges by the first decade of the twentieth century. The growing "good roads" movement in the United States and the creation of state highway commissions prompted the American Society of Civil Engineers and the American Concrete Institute to issue standards for concrete bridge design and loading during the period 1904-1913.

The same period also witnessed the development of a distinctively new reinforced concrete bridge type, the through arch or "Rainbow" arch, in Europe and the United States. By 1900, bridge engineers were familiar with design and construction of metal "bowstring trusses", defined by bridge historian J.A. Waddell as "a truss in which the lower chord is horizontal and the upper chord joints lie in the arc of a parabola, or similar curve." European engineers first realized that this type of bridge could be successfully built in reinforced concrete. A.M. Wolf's comprehensive 1914 article, "Through Arch Bridges of Reinforced Concrete", described numerous European bridges of the reinforced concrete through arch variety. The earliest such bridge identified by Wolf, which he denoted as "quite typical of the smaller European structures of this type," was the 1904 Seille River Bridge at Pettoncourt, France, which featured "parabolic arch ribs" with "fixed ends." The Seille River Bridge was constructed by Ed. Zubblin of Strassburg, Germany.

As knowledge of the "Rainbow" reinforced concrete arch bridge type increased between 1900 and 1910, it was found that the arch ribs might be rigidly fixed at the piers or abutments, or each arch rib could be connected with a tie and rest on the supports. Three-hinged arches, with no horizontal tension members used to connect the ends of ribs and relieve abutments of horizontal thrust, were also popular in many European locations. By 1914, Wolf noted that in Europe "structures with horizontal ties" were the "usual type for relatively short span highway bridges", while in North America fixed spans were still "used almost entirely." The three-hinged variety had not become popular in the United States.

Wolf's 1914 survey of "arch bridges with suspended floors having spans of over 40 meters (131 ft. 2 3/4 in.)" found eleven such bridges in Europe but only one, the Fifth Street Viaduct at Fitchburg, Massachusetts, in the United States. Introduction of the type in North America was slow, even for use in construction of shorter spans. Reported by Wolf and Engineering News as "possibly the first of its kind in this country", the earliest American through arch bridge in reinforced concrete may have been the Benson Street Bridge at Reading, Ohio, built in 1910-1911 and featuring "two hingeless reinforced concrete arch ribs" connected by ties. The editors of Railway Engineering and Maintenance of Right of Way offered a theory concerning the greater European progress regarding the through arch in reinforced concrete:

> "In Europe the development of reinforced concrete structures has been along lines such as would allow the greatest economy in materials of construction and not in labor, which is comparatively cheap. In America, until recently, the tendency has been to sacrifice and even waste material in order to cut down the labor cost of building forms and placing steel. This at once explains why the through concrete arch has reached a much higher stage of development in Europe than in America. The assumption of the greater cost of construction of this type as compared with the deck arch is without foundation in most cases, but as a rule American engineers are rather inclined to let the other fellow ascertain the real facts and figures, and then beat him at his own game."

In his 1914 article, Wolf observed that reinforced concrete through arches were usually built with flooring systems of beam-and-slab construction, with transverse floorbeams "the ends of which are attached to steel or reinforced concrete suspenders anchored into the arch ribs." These hangers were generally encased in concrete to add stiffness. Spans up to 100 feet in length could be made stiff enough to resist wind pressures without the use of overhead portal frames or struts, but for longer spans "with consequent greater rise it is the general practice to tie the two arch ribs together with stiff struts at the middle portion near crown to give the structure more lateral stiffness." Such struts should "be carried as far from the crown in both directions as the clearance required over the deck will permit." The arch ribs themselves were "in general of parabolic shape, proportioned in accordance with the usual methods of computation by the elastic or static theory." An understanding of temperature-related stresses in the exposed arch ribs was particularly important in construction of a successful reinforced concrete through arch with rigidly fixed ends.

Summarizing the case for the reinforced concrete through arch, A.M. Wolf in 1914 detailed seven main advantages the type possessed: (1) light weight compared to other reinforced concrete structures; (2) relatively thin floor construction made them especially adapted to low crossings where headroom was limited; (3) with rocker or sliding bearings for the ribs and the use of horizontal ties to take the rib thrust, effects of temperature changes on the bridge would be "practically nil"; (4) using horizontal ties to take up rib thrust allowed use of much smaller abutments, since only vertical load was transferred to them; (5) on long bridges, expansion joints could be easily added to relieve temperature stresses in the floors; (6) the type was demonstrably less expensive, yet sturdier than, a steel bridge; (7) "the through arch carefully proportioned with parabolic arch ribs possesses an appearance far more pleasing than a beam and girder or a steel bridge of any type."

By 1914, as Wolf's article acknowledged, James B. Marsh of the Marsh Engineering Company of Des Moines, Iowa, was one of the foremost American experts on the reinforced concrete through arch. In 1912, Marsh first patented a "Rainbow" arch design; between 1912 and 1930, his firm built many such bridges throughout the Midwestern states, where county and state officials sought durable structures to cross locations where little headroom was available. Early Marsh bridges such as the reinforced concrete through arch over the Little Cottonwood River in Blue Earth County, Minnesota, were often "half-through arches", in which the floor system was built at a level about halfway between the springing point and the crown of the arch ribs, and "no provision is made to take up the thrust of the arches by ties through the floor slab."

Several rainbow arches were built in the Eastern States, as well. A few remain in Pennsylvania, including the Second Street Bridge in Chester and Horner Street Bridge in Johnstown. The Horner Street Bridge is a representative example of the through arch in reinforced concrete with rigidly-fixed arch ribs, as such structures were built in the United States during the 1910-1920 period.

Interested in procuring a reinforced concrete structure for the proposed new Horner Street crossing, Johnstown authorities chose Gustav A. Flink of Harrisburg as the consulting engineer to design the bridge. Flink served from 1906 to 1912 as a draftsman for the then-newly founded Pennsylvania State Highway Department. From 1913 through 1925, he worked as a "consulting and constructing engineer" (as his letterhead described him) based in Harrisburg. During that period, Flink designed several innovative concrete bridges in addition to the Horner Street Bridge. His 1915 bridge over Little Pine Creek in Fishing Creek Township, Columbia County, was noteworthy as an unusual, open-spandrel concrete arch bridge, featuring two extremely high narrow arch ribs and an Xpattern decorative railing similar to that of the Horner Street Bridge. In 1917, Flink utilized another open-spandrel design to build a single-span arch bridge over Chest Creek in Westover Borough, Clearfield County. Two years later, he designed a two-span concrete barrel arch to cross Penn's Creek in Snyder County. This bridge also featured the star-pattern railing panels apparently favored by Flink.

Chosen to build the Horner Street Bridge to Flink's design was a prominent Cambria County general contractor, John L. Elder of Ebensburg. Elder, a civil engineer, also collaborated with Flink in constructing the aforementioned 1915 open-spandrel concrete arch bridge over Little Pine Creek in Columbia County. Other suppliers or contractors for the Horner Street Bridge may have included the Cambria Steel Company and the Lawrence Portland Cement Company, both of which periodically sent materials tests to Flink during construction of the bridge. Permission to erect the bridge across Stony Creek River was secured from the Pennsylvania Water Supply Commission, a Progressive Era state agency founded to monitor and promote flood control and proper channel utilization. Flink appointed his associate Frank Ryan to supervise the work in his stead.

With the assistance of Johnstown City Engineers Masterson and J.R. Crissey, Flink drew up design drawings for the Horner Street Bridge between September 1915 and May 1916. Though the bridge was built to Flink's instructions, Flink and the city engineers had ample precedent in their choice of a "Rainbow" or through arch structure in reinforced concrete. The Marsh patent for a "Rainbow" arch was issued in 1912, while A.M. Wolf's comprehensive article on such structures, detailing major European and American advances, appeared in March 1914. Although such American bridge engineers as Henry G. Tyrrell and J.A. Waddell did not describe the reinforced concrete through arch in their bridge engineering textbooks, the type was referenced in British engineer Frederick Rings's <u>Reinforced Concrete Bridges</u> as well as the leading European civil engineering journals. Thus, Flink and his associates confidently designed the planned Horner Street Bridge as a reinforced concrete through arch with rigidly fixed arch ribs, hangers, and portal frames.

The design drawings for the Horner Street Bridge correspond to the bridge as it was built: a two-span 225 foot arch structure with each 109 foot long span defined by its distinctive pair of parabolic "Rainbow" arch ribs. Rigidly fixed at the bridge abutments and the central, mid-channel pier, the ribs were designed to ascend gracefully and symmetrically above the bridge deck. Also symmetrically arranged, seven concrete hangers descend from each arch rib to the deck, where the steel "re-bars" encased in the hangers were directly connected to the bottom floorbeam reinforcing bars. The central pier was designed to have a width of seven feet near its top and broaden to about eight feet at its base above the water. The bridge deck was built at a clearance of 12.4 feet above high water in the Stony Creek River.

Substructure details were also delineated in existing drawings. Abutments were to be located in accordance with city ordinances defining the channel of Stony Creek River. The four twenty-foot wings were to be angled according to direction of the city engineer; as built, the wingwalls extend nearly perpendicular to the bridge alignment and are topped by small balustrades featuring urn-shaped balusters. The abutments and the center pier were built on spread footings; a tapered apron surrounds the base of the pier.

The drawings also noted specifications for construction details. Concreting of the "rib-buttresses" (hangers and portal frames) was to proceed "uninterruptedly, with no horizontal seams being permitted." "U-stirrups" were to link the reinforcing bars of the hangers with those within the deck and arch ribs. The reinforcing bars for the two concrete portal frames in each span were to be rigidly connected to the rib reinforcement. The concrete for each set of opposite ribs was also "to be poured simultaneously." All structural steel was to be wrapped in wire netting. All forms were to be "rigid and waterproof; true to lines, and well braced." Forms were to be removed from all exposed surfaces within 48 hours after placing concrete, "and the concrete surface rubbed with a rough wooden trowel and clear water." No plaster or cement wash was permitted.

As the deck was to carry electric trolley as well as vehicular traffic, considerable care was taken to ensure that the structure could accommodate both modes. The "roadway floor slab" was to be finished smooth and waterproof. The eight-inch concrete deck originally was overlain with a four-inch brick wearing course on a "sand cushion of 1 inch." Sixty days after completion of the structure, a live load test "equal to a 30-ton trolley car" was to be made. The trolley rails themselves were to be installed by the Johnstown Traction Company, operator of the city's streetcar system. The traction company also supervised such details as insulation and jar-cushioning of the trolley tracks, as well as their support on special stringers running the length of the deck between the floor beams. The Horner Street Bridge was to be lighted by lamps set in opalescent globes atop ornamental metal streetlamp standards.

Its "Rainbow" arch design a striking architectural statement, the Horner Street Bridge was characterized by simple ornamentation. As Gustav Flink noted in an August 4, 1915 letter to Johnstown's Superintendent of Highways, the structure was intended as "a beautiful ornamental bridge with one pier and two spans at Horner Street." Johnstown authorities of the era were clearly influenced by the "City Beautiful" movement popularized by Daniel Burnham and other progressive municipal planners at the 1893 Columbian Exposition in Chicago. In 1916-1917, the city commissioned the prominent New York firm of Hornbostel and Wild, with Victor A. Rigaumont as resident planner, to draft a plan for the civic beautification of the community. Though not fully implemented due to lack of funding, the resulting plan for "Johnstown, a city practicable" recommended new parks, wide boulevards, and improved trolley service over a series of new bridges.

Not specifically mentioned in the city plan, the Horner Street Bridge nonetheless embodied the stylistic and functional aims of Johnstown's urban planners in the early twentieth century. The simple ornamentation of the bridge includes stylized pilasters above pyramidal caps on the pier, and symmetrical recessed panels on the interior and exterior surfaces of the arch ribs, the hangers, and the overhead portal braces. The prominent concrete railings, consisting of simply-divided rows of three or four star-pattern panels, define the deck level of the bridge for viewers upstream or downstream. A symmetrical pair of twenty-foot, perpendicular wingwalls, topped by balustrades featuring a short row of ten urn-shaped balusters, clearly define the beginning of the bridge at each street approach.

On May 12, 1917, Consulting Engineer Flink notified city authorities that the Horner Street Bridge was completed, with the exception of some wire brushing of surfaces and the placement of the light fixtures, which were late to arrive. Although the lighting standards were not yet installed, the bridge was officially opened to traffic on May 20, 1917. The structure promptly proved its usefulness when a popular circus came to Hornerstown several days later; crowds were easily able to ride or walk to the circus grounds, located at the Hornerstown end of the new bridge.

In June 1917, the City of Johnstown agreed to erect retaining and cribbing walls to hold fill for the Horner Street Bridge's northerly approach, then under construction on property partially owned by the Lorain Steel Company. Records indicate that the Horner Street Bridge ably fulfilled its major purpose as a structure carrying the Horner Street line of the Johnstown trolley system. In 1948, a city council resolution authorized the resurfacing of Horner Street from its intersection with Messenger Street to the Valley Pike, a section including the Horner Street Bridge. In 1950, a group of Hornerstown business owners requested that the Johnstown Traction Company aid the resurfacing effort and provide bus service to replace their Horner Street trolley rails and overhead cables. The Horner Street trolley line was discontinued on November 11, 1951.

From 1951 to the present, the Horner Street Bridge remained in service as a vehicular and pedestrian crossing. On November 13, 1962, the Johnstown City Council authorized asphalt paving of both sidewalks of the bridge. Further repairs to the bridge, including guniting of chipped concrete and installation of mercury vapor lighting at the direction of the Pennsylvania Electric Company (PENELEC), were completed between 1965 and 1969.

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